LosAngelesCounty

Draft GHG Emissions Inventory and Forecasts

Greenhouse Gas Emissions, Climate Change, and Assembly Bill 32

Over the past 50 years, changes in the global climate, such as temperature increases and sea level rise, have accelerated. There is strong consensus amongst most of the scientific community that these changes are the probable result of man-made greenhouse gas (GHG) emissions. Changing climatic conditions as a consequence of excess GHG emissions in the atmosphere may impact California and Los Angeles County, resulting in higher energy bills, increases in the number of extreme heat days, and sea level rise.

In 2006, California adopted Assembly Bill (AB) 32, the Global Warming Solutions Act, as an effort to address the effects of climate change. AB 32 establishes a statewide goal to achieve 1990 GHG emissions levels by 2020. In the *AB 32 Scoping Plan*, the California Air Resources Board (CARB) suggests a unique role for local governments and communities, and recommends that they reduce their GHG emissions consistent with statewide GHG reduction goals.

GHG Emissions Inventory and Forecasts for Unincorporated Los Angeles County

An emissions inventory is an accounting of total GHG emissions within a specific jurisdiction. To inform the development of the County's Community Climate Action Plan, which is a component of the General Plan Update, the County prepared a 2010 GHG emissions inventory for community activities in the unincorporated County. The County also developed emissions forecasts for 2020 and 2035, based on anticipated population, employment, and household growth in the unincorporated County. The emissions inventory and forecasts can serve as a base for assessing emissions reduction goals.

The County's GHG emissions inventory and forecasts are organized by six categories. The top two emissions categories are *building energy* and *land use and transportation*. Emissions in the *building energy* category largely result from electricity used to cool homes and to power household appliances. Emissions in the *land use and transportation* category are primarily due to on-road vehicles, and in particular, passenger cars.

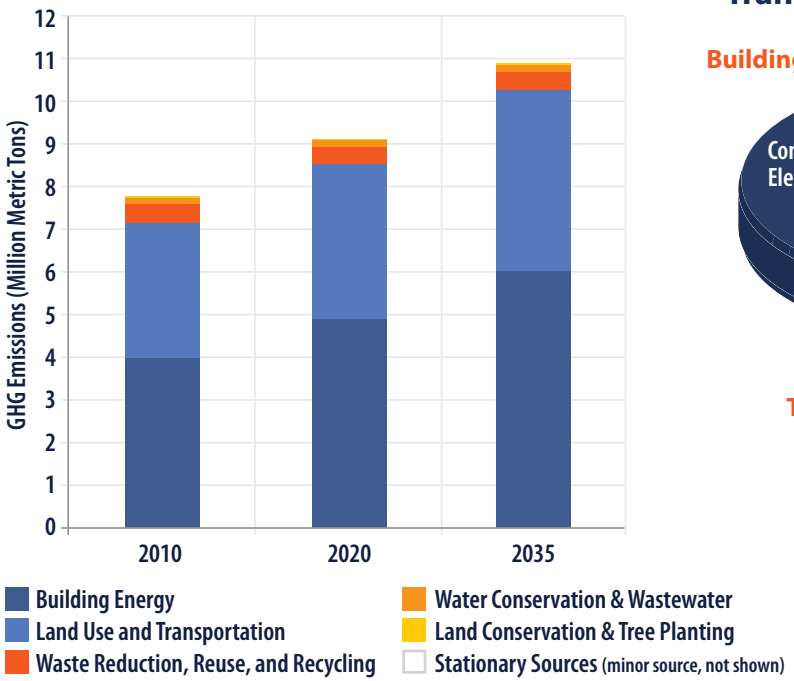
The Greenhouse Effect, Global Warming, and Climate Change

The greenhouse effect is a natural process that keeps the atmosphere near the Earth's surface warm by trapping a portion of infrared radiation emitted by the Earth's surface. Human activities that generate GHG emissions enhance the natural greenhouse effect and increase global surface temperatures, which is a phenomenon commonly referred to as *global warming*. Higher global surface temperatures in turn result in changes to the Earth's climate system, which is commonly referred to as *climate change*.

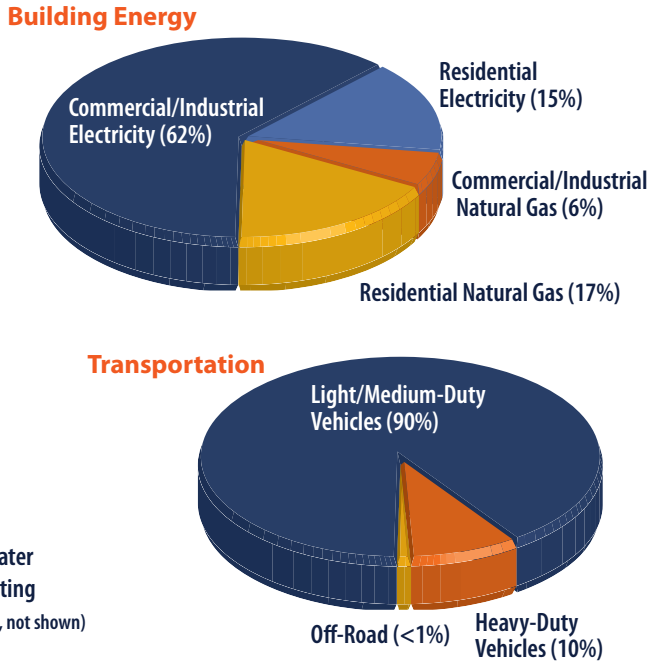
GHG Emissions Inventory Methods

GHG emissions generated by the unincorporated County were assessed and quantified using standard software tools, techniques, and emission factors. Currently accepted inventory protocols, including the ICLEI-Local Governments for Sustainability Local Government Operations Protocol and the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions, were used to establish a framework for emissions reporting and quantification. A variety of data sources were also used to develop this emissions inventory and forecasts, including electricity and natural gas consumption and on-road vehicle miles traveled.

Increasing Emissions



Bird's Eye View of Building Energy and Transportation (2010 Inventory)



Comparison of Unincorporated Los Angeles County to Other Areas

Per capita emissions, or total GHG emissions per person, are a useful metric for quick comparison of the unincorporated County's emissions to that of other counties, cities, and regions in the U.S. and California. The unincorporated County's per capita emissions are slightly lower than the majority of jurisdictions shown below.